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EXAMINER

GHAYOUR, MOHAMMAD H

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/124,642

Applicant(s)
Jie Ni et al.

Examiner
Mohammad Ghayour

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 19, 2002
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/19/2002 have been fully considered but they are not persuasive.

APPLICANTS' ARGUMENT: In page 3 of "RESPONSE" applicants argue that "neither Sauer nor Olafsson, either individually or in combination. Address loss of reception as claimed and described in the above-referenced patent application".

THE EXAMINER'S RESPONSE: First, any person skilled in the art knows that when reception is lost, synchronization is lost, too; otherwise if proper reception continues, synchronization remains intact. Therefore, every time the reception is lost is when the system attempts to gain back the reception and the synchronization. Second, in col. 3, lines 7-14, Sauer et al. clearly teaches the different events after which synchronization or resynchronization is required, specifically event No. 4 (lines 12-13) where it clearly states that "an interruption and reconnection to transmission path". An interruption to communication path means **LOSS OF RECEPTION**. Therefore, Sauer et al. teaches as when resynchronization in a data communication is required; and Olafsson, in the same field of endeavor, teaches how to gain that resynchronization by repeatedly transmit one or more repetition of a known signal segment (col. 11, lines 31-34). Furthermore, applicants argument that Olafsson teaching of transmitting repeated symbols is different from applicant transmission of repeated characters is not persuasive

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because it would be obvious to one of ordinary skill in the art to replace symbols with characters or bits and arrive at the same invention. Moreover, according to Newton's Telecom Dictionary (Expanded Edition, page 144) a character is defined as "A letter, a number, or a symbol." also, the combination of Sauer and Olafsson is proper because in the same field of endeavor (i.e. data communication between two nodes) one teaches when the resynchronization is required and the other teaches how resynchronize.

APPLICANTS ARGUMENT: In page 4, applicants state that the examiner's reliance on official notice is specifically traversed and that the examiner must provide prior art that shows these claimed feature.

THE EXAMINER'S RESPONSE: First, the examiner's position is (as explained in previous office action) that since the teaching of when the resynchronization is required and how to achieve resynchronization is disclosed by the combination of Sauer and Olafsson, then just by simply replacing Olafsson characters with an Idle 1 or Idle 2 characters (as claimed by applicants) does not make the claimed subject matter patentably distinct over the prior art, because Idle 1 or Idle 2 characters are still a combination ones and zeros; and if a processor can recognize a set of characters as synchronizing characters, it would be obvious to one ordinary skill in the art to reprogram it to recognize a different set of characters. Second, in page 4, lines 29-31, of the specification applicants state that " In this particular embodiment, the aforementioned idle character is the "idle 1" character, as defined in the aforementioned specification, although any character may be employed, whether defined by the aforementioned

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specification or not". Therefore, applicants themselves admit that any character may be used in order to gain resynchronization which would have been the conclusion reached by any person of ordinary skill in the art. Finally, the examiner is providing reference (i.e. IBM Technical Disclosure Bulletin, May 1965) that teaches the use of Idle characters for synchronization and Nakayama's Patent to fulfil the requirements of reliance on official notice.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 7-10, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sauer et al. (US Patent 6,011,821) in view of Olafsson (US Patent 6,081,567). As to claims 1, 10, and 16, Sauer et al. disclose the conditions under which synchronization or resynchronization is

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required in a communication system such as the loss of reception (see col. 3, lines 12-13). On the other hand, Olafsson discloses, in the same field of endeavor, that upon the determination that the synchronization is lost between two ends (two modems) a repetition of a known set of symbols (i.e. predetermined characters) is transmitted from one end (i.e. one of the modems) to the other end until synchronization is regained (i.e. the two ends are resynchronized). See col. 11, lines 8-50. Therefore, it would have been obvious to one of ordinary skill in the art to, upon the loss of reception, repeatedly transmit a sequence of known characters from one end of communication network to the other end so that the other end receive the known characters and based on the recognition of the known characters synchronizes its reception to the transmission of the other end and vice versa, because only a sequence known characters between the ends can synchronize the transitions of the clock signals of the two ends with the reception of data transfer between the two ends. As to claims 7, and 9 Sauer et al. teaches using different time windows for receiving and detection of expected signal before it generates an error signal or when three successive frames are absent within a certain time period (see col. 3, lines 19-59). Therefore, such time windows for receiving a certain number of characters or detection schemes similar to the ones recited in claims 7 and 9 are well known or a matter of common knowledge in the art. As to claim 8, Sauer teaches that after synchronization is achieved, if an error occurs (invalid data, for example) a reset process is applied at that end (the modem's end) until the error is no longer present (see col. 3, lines 24-30). As to claims 17-19, the recited compatibility or lack of

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compatibility with various standards and specifications are part of systems design criteria and choices as is common in many networks.

4. Claims 2, 3, 5, 6, 11, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sauer and Olafsson as applied to claims 1 and 10 above, and further in view of Jordan et al. (IBM Technical Disclosure Bulletin, May 1965). Sauer and Olafsson disclose all the subject matter claimed, see paragraph 3 above, except for the further limitation as recited in claims 2, 3, 5, 6, 11, and 12-15. Jordan teaches, in the same field of endeavor, the use of Idle characters for resynchronization. See page 3, paragraph 3. Furthermore, as explained above, the difference in type of synchronization characters (e.g. Idle, idle 1, or any other type) or the consecutive number synchronization character being transmitted to achieve synchronization does not make the claimed subject matter patentably distinct over the prior art because, as explained above, synchronization characters are still a set of combinations of "1s" and "0s" and therefore, one of ordinary skill in the art can select, based on the design criteria, a specific combination of characters or a specific repetitions of them as synchronization characters; especially, as pointed to above, applicants themselves admit that any characters may be employed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose any character set as synchronization characters because synchronization characters are simply a combination set of none data characters which are designed to be conventionally recognized by transmitter and receiver as synchronizing characters to synchronize the transmitter with the receiver.

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5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sauer and Olafsson as applied to claim 1 above, and further in view of Nakayama (US Patent 5,259,004). Sauer and Olafsson disclose all subject matter claimed, see above, except for the further limitation as claimed in claim 4. In col. 5, line 62 to col. 6, line 1, Nakayama teaches signaling the loss of synchronization. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to signal the loss of synchronization in order to start proper process to gain resynchronization.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ghayour whose telephone number is (703) 306-3034. The examiner can normally be reached on Monday-Thursday from 8.30AM to 4.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached on (703) 305-4714. The fax phone number for this group is (703) 308-6743.

Any inquiry of general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


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Mohammad Ghayour

Patent Examiner


MOHAMMAD H. GHAYOUR
PRIMARY EXAMINER